

Jonas Hübötter

Github: github.com/jonhue

Portfolio: jonhue.github.io

Email: jonas.huebotter@gmail.com

Mobile: +41 79 287 04 02

EDUCATION

- **ETH Zurich** Zurich, Switzerland
PhD in Computer Science
Topic: Towards Effective Learning At Test-Time, Advisor: Andreas Krause
since 2023
- **ETH Zurich** Zurich, Switzerland
MSc in Computer Science
Theoretical Computer Science (Major) and Machine Learning (Minor)
ETH Medal for best thesis (awarded to top 2.5% of all ETH graduates)
2021 - 2023
- **Technical University Munich** Munich, Germany
BSc in Computer Science (passed with distinction)
Computer Science (Major) and Mathematics (Minor)
2018 - 2021

EXPERIENCE

- **Citadel Securities (Market Maker)** London, United Kingdom
Quantitative Researcher (Internship)
July 2022 - September 2022
 - **Time-series prediction:** and monetization with Guillaume Basse and Sören Künzel. Received a full-time return offer.
- **Uncountable (R&D Platform)** Munich, Germany
Machine Learning Engineer (Part-time)
April 2020 - July 2021
 - **Work with R&D teams:** to streamline their data and accelerate development using Bayesian optimization
 - **Intelligent Suggestion of Formulations:** Extended existing features to reflect linear constraints like cost and stoichiometric ratios when identifying promising formulations.
 - **Outlier Detection:** Developed an end-to-end feature set to detect outliers and bimodal distributions.
- **Liefery (Same-Day Delivery)** Berlin/Munich, Germany
Software Engineer (Internship, then Part-time)
May 2018 - Mar 2020
 - **Leading the team to adopt an automated continuous delivery workflow:** increasing quality and quantity of production deployments with less downtime
 - **Scalability:** Worked on route planning algorithms and data organization supporting timely delivery of hundreds of thousands of shipments a month.

PUBLICATIONS

- **Transductive Active Learning: Theory and Applications:** JH, Bhavya Sukhija, Lenart Treven, Yarden As, Andreas Krause. Preprint, 2024.
ICLR Workshop on Bridging the Gap Between Practice and Theory in Deep Learning
ICML Workshop on Aligning Reinforcement Learning Experimentalists and Theorists (Oral)
- **Efficient Exploration in Continuous-time Model-based Reinforcement Learning:** Lenart Treven, JH, Bhavya Sukhija, Florian Dörfler, Andreas Krause. NeurIPS, 2023.
- **Tuning Legged Locomotion Controllers via Safe Bayesian Optimization:** Daniel Widmer, Dongho Kang, Bhavya Sukhija, JH, Andreas Krause, Stelian Coros. CoRL, 2023.
- **A Cut-Matching Game for Constant-Hop Expanders:** Bernhard Haeupler, JH, Mohsen Ghaffari. Preprint, 2022.

KEY PROJECTS

- **Lecture notes on Probabilistic Artificial Intelligence (Writing, Teaching):** Writing a set of lecture notes with Andreas Krause. Some of the covered topics are (Approximate) Probabilistic Inference, Gaussian Processes, Bayesian Deep Learning, Bayesian optimization, Active Learning, and Reinforcement Learning. ('22 - '23)
- **Widely Used Open-Source Libraries:** I created multiple NPM and Ruby libraries that collectively have been downloaded for well over a million times. (since '16)
- **Type Inference of TypeScript:** I contributed numerous improvements to TypeScript's type inference algorithm, which satisfied the strong requirements for external contributions. These included stronger type inference, stricter type checks, and more accurate error messages. (Nov '20 - Feb '21)
- **Static site generated from CMS (Web Development, Automization):** I built a company website that is static (so lightning fast!), but dynamically generated from a CMS. This might not sound like a big achievement, but I build it such that it incurs *zero* monthly maintenance costs. Technology: TypeScript, Gatsby (hosted on GitHub Pages with GitHub Actions), Strapi (hosted on Heroku), GraphQL. (Mar '21)

TEACHING

I taught students on a wide range of topics such as Probabilistic Artificial Intelligence, Advanced Graph Algorithms and Optimization, Theory of Computation, Probability Theory, and Functional Programming and Verification.

SKILLS SUMMARY

Key skills: *modeling* complex problems, *designing* algorithms and tech stacks, *understanding* and efficiently *organizing* data, *automatization*.

I like to challenge myself/be challenged, so the following are merely an excerpt of the technologies/skills that I have used and acquired along the way.

- **Languages:** Python, TypeScript, Rust, C++, Java, Ruby, Haskell
- **Frameworks:** PyTorch, JAX, Numpy, Transformers, SciKit, Pandas, React, Redux, Gatsby, NodeJS, Rails, Flask
- **Tools:** Docker, Git, GitHub Actions, PostgreSQL, MongoDB
- **Soft Skills:** Teaching, Writing, Leadership, Time Management, Public Speaking

HONORS

- ETH Medal - Feb 2024
- Graduate scholarship by the German Academic Scholarship Foundation (Studienstiftung) - Feb 2021
- Undergraduate scholarship by the German Academic Scholarship Foundation (Studienstiftung) - Feb 2019